```
              9        18       27       36       45       54
5' NCG CCG GTT CGT CTA CTC TTT CCT TCA GCC GCC TCC TTT CAA CCT TGT CAA CCC

             63       72       81       90       99      108
   GTC GGC GCG GCC TCT GGT GCA GCG GCG GCT CCT GTT CCT GCC GCA GCT CTC

            117      126      135      144      153      162
   TCC CTT TCT TAC CTC CCC ACC AGA TCC CGG AGA TCG CCC GCC ATG GCT TTA CTT
                                                         M   A   L   L

            171      180      189      198      207      216
   ACT GCG GCC GCC CGG CTC TTG GGA ACC AAG AAT GCA TCT TGT CTT GTT CTT GCA
    T   A   A   A   R   L   L   G   T   K   N   A   S   C   L   V   L   A

            225      234      243      252      261      270
   GCC CGG CAT GCC AGT GCT TCC TCC ACG AAT TTG AAA GAC ATA TTG GCT GAC CTG
    A   R   H   A   S   A   S   S   T   N   L   K   D   I   L   A   D   L

            279      288      297      306      315      324
   ATA CCT AAG GAG CAG GCC AGA ATT AAG ACT TTC AGG CAG CAA CAT GGC AAG ACG
    I   P   K   E   Q   A   R   I   K   T   F   R   Q   Q   H   G   K   T

            333      342      351      360      369      378
   GTG GTG GGC CAA ATC ACT GTG GAC ATG ATG TAT GGT GGC ATG AGA GGC ATG AAG
    V   V   G   Q   I   T   V   D   M   M   Y   G   G   M   R   G   M   K
```

FIGURE 1A

```
                387                    396                    405                    414                    423            432
GGA TTG GTC    TAT GAA ACA    TCA GTT CTT    GAT GAG GGC    ATC CGT TTC    CGA
 G   L   V      Y   E   T      S   V   L      D   E   G      I   R   F      R

                441                    450                    459                    468                    477            486
GGC TTT AGT    ATC CCT GAA    TGC CAG AAA    CTG CTA CCC    AAG GCT GGT    GGG GAA
 G   F   S      I   P   E      C   Q   K      L   L   P      K   A   K      G   G   E

                495                    504                    513                    522                    531            540
GAA CCC CTG    CCT GAG TTA    TTT TGG CTG    CTG GTA ACT    GGA CAT ATC    CCA ACA
 E   P   L      P   E   G      L   F   W      L   L   V      T   G   H      I   P   T

                549                    558                    567                    576                    585            594
GAG GAA CAG    GTA TCT TGG    CTC TCA AAA    GAG TGG GCA    AAG AGG GCA    GCT CTG CCT
 E   E   Q      V   S   W      L   S   K      E   W   A      K   R   A      A   L   P

                603                    612                    621                    630                    639            648
TCC CAT GTG    GTC ACC ATG    CTG GAC AAC    TTT CCC ACC    AAT CTA CAC    CCC ATG TCT
 S   H   V      V   T   M      L   D   N      F   P   T      N   L   H      P   M   S

                657                    666                    675                    684                    693            702
CAG CTC AGT    GCA GCT GTT    ACA GCC CTC    AAC AGT GAA    AGT AAC TTT    GCC CGA GCA
 Q   L   S      A   A   V      T   A   L      N   S   E      S   N   F      A   R   A

                711                    720                    729                    738                    747            756
TAT GCA CAG    GGT ATC AGC    CGA ACC AAG    TAC TGG GAG    TTG ATT TAT    GAA GAC TCT
 Y   A   Q      G   I   S      R   T   K      Y   W   E      L   I   Y      E   D   S
```

FIGURE 1B

```
      765             774          783          792          801          810
ATG GAT ATC GCA   AAG CTA CCT   TGT GTT GCA   GCA AAG ATC   TAC CGA AAT   CTC
 M   D   I   A     K   L   P     C   V   A     A   K   I     Y   R   N     L

      819             828          837          846          855          864
TAC AGA GGC AGC   ATT GGT ATT   GGG GCC ATT   GAC TCT AAC   CTG GAC TGG   TCT CAC
 Y   R   G   S     I   G   I     G   A   I     D   S   N     L   D   W     S   H

      873                 882      891          900          909          918
AAT TTC ACC AAC ATG   TTA GGC   TAT GAT CAT   CAG TTC ACT   GAG CTC ACG   CGC
 N   F   T   N   M     L   G     Y   D   H     Q   F   T     E   L   T     R

      927                 936      945          954          963          972
CTG TAC CTC ACC ATC   CAC AGT   GAC CAT GAG   GGT GGC AAT   GTA AGT GCC   CAT ACC
 L   Y   L   T   I     H   S     D   H   E     G   G   N     V   S   A     H   T

      981                 990      999          1008         1017         1026
AGC CAT TTG GTG GGC   AGT GCC   CTT CAC GGA   CCT CTC GCA   AAT CAG GAA   GTG CTT GTC
 S   H   L   V   G     S   A     L   H   G     P   L   A     N   Q   E     V   L   V

      1035                1044     1053         1062         1071         1080
ATG AAC GGG CTG GCA   GGG CCT   CTC CAT GGA   CTG GCA AAT   CAG GAA GTG   CTT GTC
 M   N   G   L   A     G   P     L   H   G     L   A   N     Q   E   V     L   V

      1089                    1098     1107         1116         1125         1134
TGG CTA ACA CAG CTG CAG   AAG GAA   GTT GGC AAA   GAT GTG TCA   GAT GAG AAG   TTA
 W   L   T   Q   L   Q     K   E     V   G   K     D   V   S     D   E   K     L
```

FIGURE 1C

```
        1143        1152        1161        1170        1179        1188
CGA GAC TAC ATC TGG AAC ACA CTC AAC TCA GGA CGG GTT GTT CCA GGC TAT GGC
 R   D   Y   I   W   N   T   L   N   S   G   R   V   V   P   G   Y   G

        1197        1206        1215        1224        1233        1242
CAT GCA GTA CTA AGG ACT GAT CCG CGA TAT ACC TGT CAG CGA GAG TTT GCT
 H   A   V   L   R   T   D   P   R   Y   T   C   Q   R   E   F   A

        1251        1260        1269        1278        1287        1296
CTG AAA CAC CTG CCT AAT GAC CCC ATG TTT AAG TTG GTT GCT CAG CTG TAC AAG
 L   K   H   L   P   N   D   P   M   F   K   L   V   A   Q   L   Y   K

        1305        1314        1323        1332        1341        1350
ATT GTG CCC AAT GTC CTC TTA GAG CAG CAG GGT AAA GCC AAG AAT CCT TGG CCC AAT
 I   V   P   N   V   L   L   E   Q   G   K   A   K   N   P   W   P   N

        1359        1368        1377        1386        1395        1404
GTA GAT GCT CAC AGT GGG GTG CTG CTC CAG TAT TAT GGC ATG ACG GAG ATG AAT
 V   D   A   H   S   G   V   L   Q   Y   Y   G   M   T   E   M   N

        1413        1422        1431        1440        1449        1458
TAC TAC ACG GTC CTG TTT GGG GTG TCA CGA GCA TTG GGT GTA CTG GCA CAG CTC
 Y   Y   T   V   L   F   G   V   S   R   A   L   G   V   L   A   Q   L

        1467        1476        1485        1494        1503        1512
ATC TGG AGC CGA GCC TTA GGC TTC CCT CTA GAA AGG CCC AAG TCC ATG AGC ACA
 I   W   S   R   A   L   G   F   P   L   E   R   P   K   S   M   S   T
```

FIGURE 1D

```
        1521          1530          1539          1548          1557          1566
GAG GGT CTG ATG AAG TTT GTG GAC TCT AAG TCA GGG TAA AAC TGG AGA CTG GGT
 E   G   L   M   K   F   V   D   S   K   S   G   *

        1575          1584          1593          1602          1611          1620
GAA AGT GAC TAC CAG AAA GTG AGG AAG CCT AAA TAA AAA GTA TTT TGT TTC

        1629          1638          1647          1656          1665          1674
AGG GGG CCT TTA AAG ACT TAA GAT TAA ATT ATA TCT GAG GCA CTG ATA ATA TGT

        1683          1692          1701          1710          1719          1728
TTG AGG TTA AAA TAT AAA CTT TAA AAG ATG AAA AAT GGT CCC TTC TTC

        1737          1746          1755          1764          1773          1782
CCT AAT CAG CTC CCT TCC CCT GCC TGG TAT GAG TTG CCC ATC ATA CGC ATG GTC

        1791          1800          1809          1818          1827          1836
CTG GAG GAT GAC CAG GAC TAA TGC ATG TGG TAT GAG TAG GTT TGG CCC CCT CAC

        1845          1854          1863          1872          1881          1890
TAT CTC TAG AGT GAG AAT CTG GCT CCT GTT TCC ATG GGT CAA AGC CGG TTG CAG
```

FIGURE 1E

```
     1899       1908       1917       1926       1935       1944
AGA ATC TGT AGT CAC TTT GGA GCT TTA GCT TCT CTG CCA AGC CCT CAA TAA GCC

     1953       1962       1971       1980       1989       1998
AGC AAA CCA GGA CTC TGC CCC TTC TGT TTC CAT AGG AAT CAT GTT GGA TAG TCA

     2007       2016       2025       2034       2043       2052
GCT GTA CCA AGC CCC TTG GCC CTC TCC CAT GCA CAC AAA CAC CTC CTA GCA AGA

     2061       2070       2079       2088       2097       2106
CCT GTT GGT TAG CTG GAC ATG CTT TGG CAA TTT TTT TAT ACT ACC AAG TGA CCA

     2115       2124
TAT TGG CAT GGC ATT TTT TGG TGA TG 3'
```

FIGURE 1F

```
  1  │M A L L T A A A R L L G T K N A S C L V│  2171653
  1  │M A L L T A A A R L F G A K N A S C L V│  GI 164419

 21  │L A A R H A S A S S T N L K D I L A D L│  2171653
 21  │L A A R H A S A S S T N L K D I L A D L│  GI 164419

 41  │I P K E Q A R I K T F R Q Q H G K T V V│  2171653
 41  │I P K E Q A R I K T F R Q Q H G N T V V│  GI 164419

 61  │G Q I T V D M M Y G G M R G M K G L V Y│  2171653
 61  │G Q I T V D M M Y G G M R G M K G L V Y│  GI 164419

 81  │E T S V L D P D E G I R F R G F S I P E│  2171653
 81  │E T S V L D P D E G I R F R G Y S I P E│  GI 164419

101  │C Q K L L P K A K G G E E P L P E G L F│  2171653
101  │C Q K M L P K A K G G E E P L P E G L F│  GI 164419

121  │W L L V T G H I P T E E Q V S W L S K E│  2171653
121  │W L L V T G Q I P T E E Q V S W L S K E│  GI 164419

141  │W A K R A A L P S H V V T M L D N F P T│  2171653
141  │W A K R A A L P S H V V T M L D N F P T│  GI 164419

161  │N L H P M S Q L S A A V T A L N S E S N│  2171653
161  │N L H P M S Q L S A A I T A L N S E S N│  GI 164419

181  │F A R A Y A Q G I S R T K Y W E L I Y E│  2171653
181  │F A R A Y A E G I H R T K Y W E L I Y E│  GI 164419

201  │D S M D L I A K L P C V A A K I Y R N L│  2171653
201  │D C M D L I A K L P C V A A K I Y R N L│  GI 164419

221  │Y R E G S G I G A I D S N L D W S H N F│  2171653
221  │Y R E G S S I G A I D S K L D W S H N F│  GI 164419
```

FIGURE 2A

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241  T N M L G Y T D H Q F T E L T R L Y L T   2171653
241  T N M L G Y T D A Q F T E L M R L Y L T   GI 164419

261  I H S D H E G G N V S A H T S H L V G S   2171653
261  I H S D H E G G N V S A H T S H L V G S   GI 164419

281  A L S D P Y L S F A A A M N G L A G P L   2171653
281  A L S D P Y L S F A A A M N G L A G P L   GI 164419

301  H G L A N Q E V L V W L T Q L Q K E V G   2171653
301  H G L A N Q E V L V W L T Q L Q K E V G   GI 164419

321  K D V S D E K L R D Y I W N T L N S G R   2171653
321  K D V S D E K L R D Y I W N T L N S G R   GI 164419

341  V V P G Y G H A V L R K T D P R Y T C Q   2171653
341  V V P G Y G H A V L R K T D P R Y T C Q   GI 164419

361  R E F A L K H L P N D P M F K L V A Q L   2171653
361  R E F A L K H L P H D P M F K L V A Q L   GI 164419

381  Y K I V P N V L L E Q G K A K N P W P N   2171653
381  Y K I V P N V L L E Q G K A K N P W P N   GI 164419

401  V D A H S G V L L Q Y Y G M T E M N Y Y   2171653
401  V D A H S G V L L Q Y Y G M T E M N Y Y   GI 164419

421  T V L F G V S R A L G V L A Q L I W S R   2171653
421  T V L F G V S R A L G V L A Q L I W S R   GI 164419

441  A L G F P L E R P K S M S T E G L M K F   2171653
441  A L G F P L E R P K S M S T D G L I K L   GI 164419

461  V D S K S G                               2171653
461  V D S K                                   GI 164419
```

FIGURE 2B